LAND USE SERVICES DEPARTMENT

COUNTY OF SAN BERNARDINO
ECONOMIC DEVELOPMENT
AND PUBLIC SERVICES GROUP

ADVANCE PLANNING DIVISION
385 North Arrowhead Avenue • San Bernardino, CA 92415-0182 • (909) 387-4147
http://www.sbcounty.gov/landuseservices Fax (909) 387-3223

MICHAEL E. HAYS
Director of Land Use Services

October 22, 2004

RESPONSIBLE AND TRUSTEE AGENCIES
INTERESTED ORGANIZATIONS AND INDIVIDUALS

RE: NOTICE OF INTENT TO ADOPT A NEGATIVE DECLARATION FOR THE GROUNDWATER EXTRACTION AND TREATMENT SYSTEM AND RIALTO WELL NO. 3 WATER REPLACEMENT PROJECT

Dear Reader/Reviewer:

Enclosed for your review and comment is the Initial Study (IS) for the proposed Groundwater Extraction and Treatment System and Rialto Well No. 3 Water Replacement Project. The purpose of the document is to identify and describe the probable environmental impacts that would result from implementation of the proposed project. The County of San Bernardino Solid Waste Management Division (SWMD) is responding to a California Regional Water Quality Board Order (CAO R8-2004-0072) to provide replacement water to the City of Rialto and proposes to intercept an existing perchlorate plume with an array of groundwater extraction wells and treat the extracted groundwater with an above ground treatment plant. The proposed project is to be located at the Rialto Municipal Airport and Rialto Well No. 3, in the City of Rialto.

The document has been prepared to meet the State requirements of the California Environmental Quality Act (CEQA). The County proposes to adopt a Negative Declaration for the project.

The public comment period will end on **November 15, 2004**. For further information, please call (909) 387-4147. Written comments should be addressed to:

County of San Bernardino
Land Use Services Department, Advance Planning Division
Attn: Carrie Hyke, Senior Associate Planner
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

Sincerely,

Carrie Hyke

Carrie Hyke, Senior Associate Planner
Land Use Services Department, Advance Planning Division

Enclosure: Distribution List
Initial Study
Proposed Negative Declaration

MARK UFFER
Interim County Administrative Officer
NORMAN A. KANOLD
Assistant County Administrator
Economic Development and
Public Services Group

Board of Supervisors
BILL POSTMUS ..... First District
PAUL BIANE ..... Second District
DENNIS HANSBERGER ..... Third District
PATTI AGUIAR ..... Fourth District
CLIFFORD YOUNG ..... Fifth District

SAN BERNARDINO COUNTY
DRAFT INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM

This form and the descriptive information in the application package constitute the contents of Initial Study pursuant to County Guidelines under Ordinance 3040 and Section 15063 of the State CEQA Guidelines.

PROJECT LABEL:

APN: 240-251-21, 264-361-03 264-211-06, and 264-151-53

APPLICANT: County of San Bernardino, Solid Waste Management Division

PROPOSAL: Construction and operation of a groundwater well extraction array at Rialto Municipal Airport, and treatment system on property at CR-3 well site; provide alternative supply of water to CR-3 well.

COMMUNITY: Rialto, California

LOCATION: Approximately 1,300 feet north of Base Line Road, along the east and west sides of Linden Avenue

USGS QUAD: 7.5' Devore Quadrangle

T, R, SECTION: Section 33 and 34, Township 1 North, Range 5 West, San Bernardino Baseline and Meridian.

THOMAS BROS: Page 575, grid D5, Metropolitan Inland Empire, 2000 ed.

PLANNING AREA: City of Rialto

LAND USE DISTRICT: City of Rialto Municipal Airport Specific Plan.

IMPROVEMENT LEVEL: Not applicable (project area is within the City of Rialto, California).

PROJECT CONTACT INFORMATION:

Lead agency name and address:
San Bernardino County Land Use Services Department, Advance Planning Division
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182

Contact person and phone number: Carrie Hyke, Senior Associate Planner, County of San Bernardino Land Use Services Department, (909) 387-4147

Project sponsor's name and address: County of San Bernardino, Solid Waste Management Division, 222 W. Hospitality Lane, 2nd Floor, San Bernardino, CA 92415.

BACKGROUND

Following detection of perchlorate and VOCs in samples from groundwater monitoring wells adjacent to the MVSL in 2000, the Regional Water Quality Control Board (RWQCB) ordered the County of San Bernardino to complete an investigation to evaluate the nature and extent of these groundwater impacts. As a result, the County completed a three-phase investigation that involved the installation of approximately 18 new groundwater monitoring wells. The data collected indicate that groundwater immediately upgradient of the City of Rialto's water supply well No. 3 (CR-3) has been impacted by perchlorate and a variety of volatile organic compounds (VOCs). Well CR-3 is screen at a depth of 1,000 feet below ground surface (bgs) and provides a significant portion of the City of Rialto's municipal supply needs (reportedly up to 1,850 gallons per minute [gpm]). To date, perchlorate and VOCs have not been detected in samples taken directly from well CR-3. However, a monitoring well, located approximately 250 feet north of CR-3, exhibited contaminants exceeding state and federal maximum

contaminant levels (MCLs) and/or action levels (ALs) in shallow water (approximately 400 to 500 feet bgs) in the immediate vicinity of the well. As a result, it is concluded that these impacts represent a current threat to the City of Rialto's water supply at CR-3.

On September 17, 2004, the RWQCB Ordered the County to provide replacement water to the City as soon as possible or by April 1, 2005 (see RWQCB Order No. R8-2004-0072, Attachment A of this Initial Study).

The County identified the remedial efforts and conducted a detailed feasibility study of four remedial alternatives as part of a Draft Interim Remedial Investigation/Feasibility Study (DIRI/FS) (this DIRI/FS is available for review at the County of San Bernardino Solid Waste Management Division). The preferred alternative, as identified in the DIRI/FS was to intercept the plume with an array of extraction wells and treat the extracted groundwater with an above ground treatment plant. The treated water would be delivered to the City of Rialto's municipal water supply system. The "pump and treat" preferred alternative is further identified in the County's Draft Interim Remedial Action Plan (RAP) (see Attachment B) and is the subject of this environmental study. This proposed project will also meet the requirements of the RWQCB Cleanup and Abatement Order No. R8-2004-0072.

RWQCB Cleanup and Abatement Orders

On January 17, 2003, the Regional Road adopted Cleanup and Abatement Order (CAO) No. R8-2003-0013 (see Attachment C) for the County of San Bernardino. The Order required the County to investigate perchlorate being discharged to groundwater from the County's property located adjacent to the Mid-Valley Sanitary Landfill (MVSL) located in the City of Rialto. CAO No. R8-2003-0013 required the County to define the lateral and vertical extent of the perchlorate that was discharging from its property, and to cleanup and abate the effects of the discharge.

Subsequently, the County performed a series of groundwater investigations and found that perchlorate was detected throughout the upper 200 feet of groundwater at 26 parts per billion (ppb), and at 7.5 ppb at about 200 feet below the water table, in a bolehole drilled approximately 250 feet up gradient of well CR-3. Samples obtained monthly from well CR-3 have not detected perchlorate.

As stated in CAO R8-2003-0013 Item 6, the Executive Officer directed the County to submit an acceptable water supply contingency plan of CR-3 by August 6, 2004. The County submitted a conceptual plan on July 26, 2004, and proposed to begin providing replacement water to the City of Rialto by September 14, 2005. In a letter dated August 6, 2004, the Executive Officer expressed support for the County's proposal, but stated that an alternative plan should be submitted if the proposed plan could not be relied upon to commence providing replacement water by February 15, 2005. Therefore given that various legal and practical impediments exist to the County's ability to expeditiously complete its preferred alternative, it was agreed that the County could complete its preferred alternative and begin providing replacement water to the City of Rialto by April 1, 2005.

Upon review of recent findings, the RWQCB adopted CAO R8-2004-0072, which amends CAO R8-2003-0013 by adding two new items including Item 5 which requires the following: a) that the County take all actions necessary to provide replacement water that is non-detected for perchlorate to the City of Rialto by April 1, 2005, to replace the water currently extracted from CR-3; b) should the proposed plan not be implemented, the County shall submit an alternative plan no later than November 15, 2004 for approval; and c) In the event that perchlorate is detected above the State Department of Health Services Detection Limit or reported in well CR-3 prior to the County being able to provide replacement water to the City of Rialto, the County shall immediately provide water by other reasonable means.

Item 6 of CAO R8-2004-0072 was added to allow the Regional Board to reopen the Order should perchlorate treatment design standards change.

The County's approach to complying with the RWQCB order includes the purchase of municipal water for delivery to the City in accordance with the RWQCB directive, and to implement a pump-and-treat solution to capture the plume, extract the impacted water, treat the water, and provide this water to the City. The purchase of water is a "backup" plan in the event that the treatment system cannot to on-line by April 1, 2005 as directed by the RWQCB.

ENVIRONMENTAL/EXISTING SITE CONDITIONS:

The proposed project is located within and adjacent to the Rialto Municipal Airport. The airport is located within the City of Rialto in southwestern San Bernardino County about 55 miles east of Los Angeles. The airport is situated in the northeastern corner of the City, and is approximately four miles north of Interstate 10, and six miles west of Interstate 215 (see Figure 1 Regional Location Map).

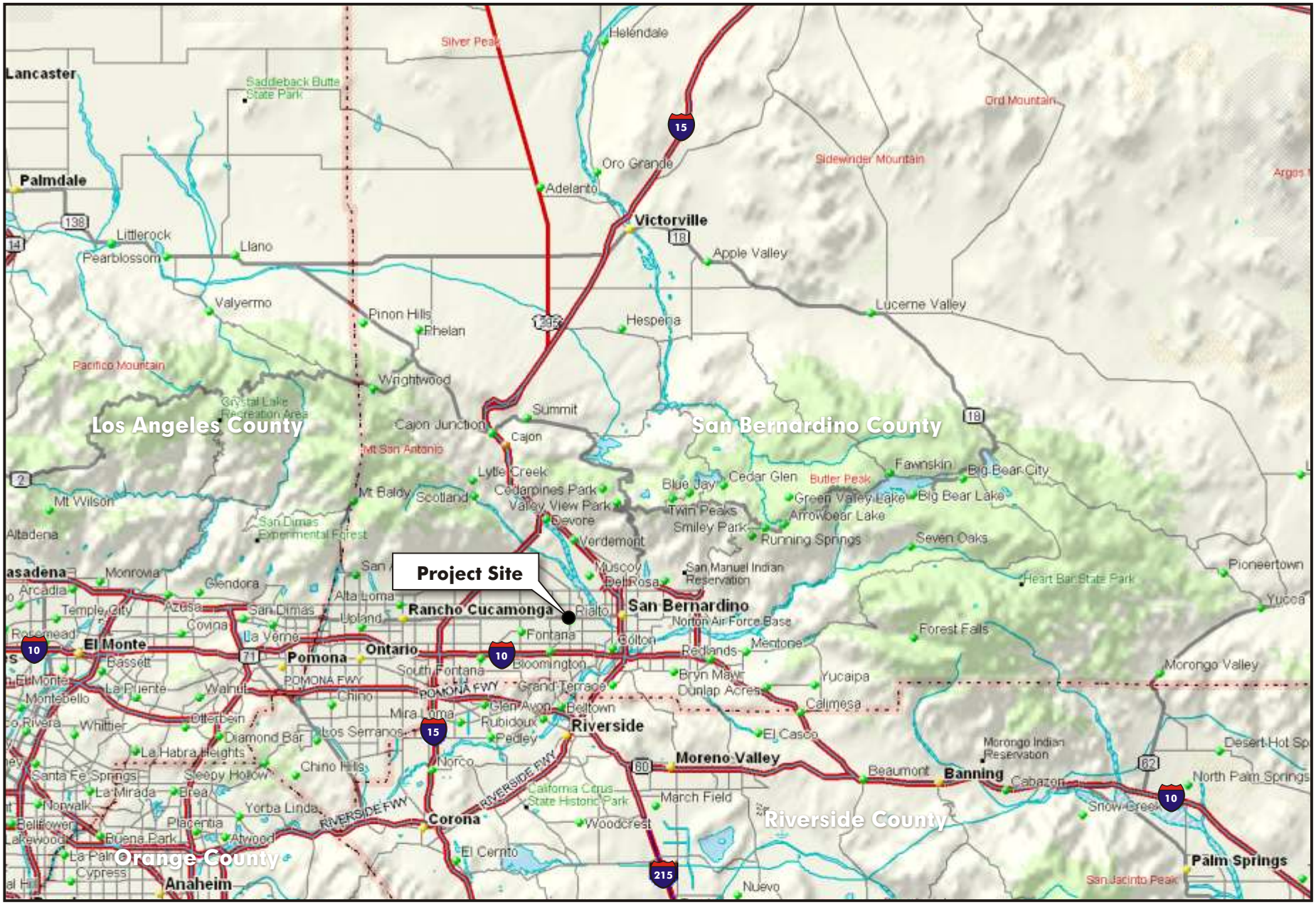
The well extraction system is proposed within the Rialto Municipal Airport property adjacent to runway 6L-24R and has a land use designation of Public Use and is zoned Planned Industrial Development. The runway is located approximately ½-mile north of Base Line Road and is situated perpendicular to Linden Avenue. Existing land uses surrounding the site are entirely airport related (e.g. runway, taxi way).

The treatment plant will be located on the same site as well CR-3, which is on a city-owned parcel located outside of the airport property on the east side of Linden Avenue approximately ¼-mile north of Base Line Road (see Site Photographs). According to the City of Rialto's General Plan, the site is designated Industrial Park and is zoned Planned Industrial Development. Existing land uses surrounding the site are listed in Table 1.

Table 1
Existing Land Uses Adjacent to the
Proposed Treatment Plan Site

AREA	EXISTING LAND USE	CITY OF RIALTO ZONING DESIGNATION
SITE	City of Rialto Well No. 3 (CR-3)	Planned Industrial Development (PID)
North	Mixture of airport related development, commercial, industrial, and the Rialto Municipal Airport.	Planned Industrial Development (PID)
South	Vacant land, commercial and industrial.	Planned Industrial Development (PID)
East	Airport related businesses, commercial, industrial and vacant land.	Planned Industrial Development (PID)
West	Linen Avenue, mixture of commercial, industrial and airport related development	Planned Industrial Development (PID)

The nearest sensitive receptor, single-family residential, is located on the southeast and west corners of North Maple Avenue and Miro Way, approximately 1,350 feet west of the project site (see Figure 2 Aerial Photograph). For the purpose of this evaluation, the two locations are combined and referenced as the "project site."



Regional Location Map

Proposed Well Extraction Array
and Water Treatment System
City of Rialto, California

LILBURN
CORPORATION

Figure 1

Photograph 1: Looking east from Linden Avenue, view of City of Rialto Well No. 3 (CR-3).

Photograph 2: Looking northeast, a view of the vacant area located south of Well CR-3.

Site Photos

Proposed Well Extraction Array
and Water Treatment System

City of Rialto, California

Prepared By:
LILBURN
CORPORATION

Photograph 3: Looking south, a view of property north of Well CR-3.

Photograph 4: Looking north, a view of runway 6-24, the proposed site of the well extraction system.

Site Photos

Proposed Well Extraction Array
and Water Treatment System

City of Rialto, California

Prepared By:
LILBURN
CORPORATION

Aerial Photo

Proposed Well Extraction Array
and Water Treatment System
City of Rialto, California

LILBURN
CORPORATION

Figure 2

SUMMARY OF PROPOSED SITE ACTIVITIES

The proposed project is the construction and operation of a groundwater extraction system to intercept the plume of contaminants and a water treatment plant to treat the extracted water by removing VOCs and perchlorate. The proposed action would minimize impacts to the regional groundwater resource by limiting the potential for additional downgradient migration. In addition, it would protect the groundwater resource providing water supply to the City of Rialto at CR-3.

The plume interception groundwater extraction system will include up to eight wells spaced approximately 400 feet on center across the width of the identified plume. As conceptually designed, the well array would be positioned approximately perpendicular to the plume migration path and parallel to the City's airport runway alignment just upgradient of CR-3 (see Figure 3 Proposed Well Extraction Array and Water Treatment System).

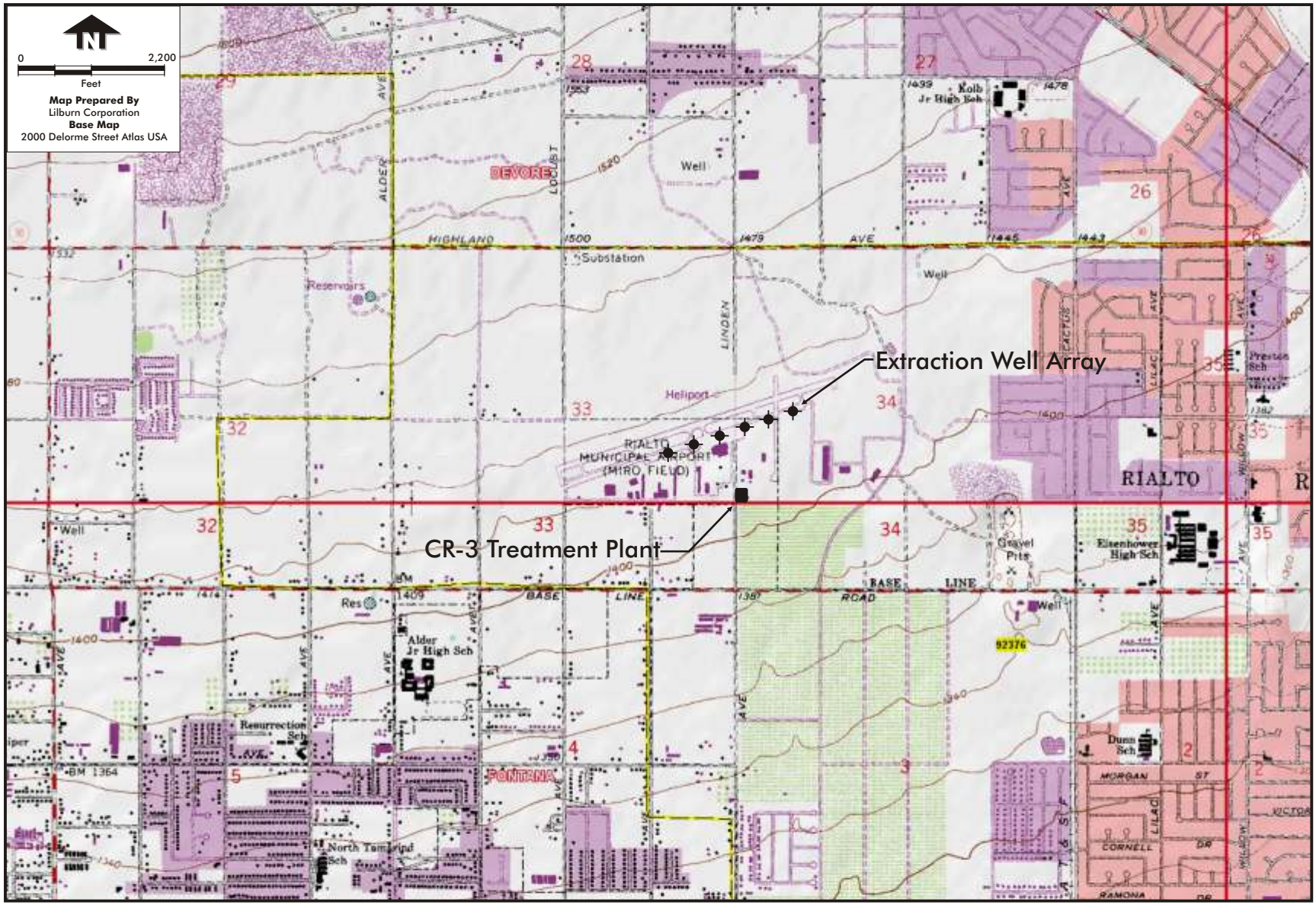
Extraction wells will be constructed to a depth of approximately 525 feet using eight-inch diameter stainless steel well screen in the anticipated producing zone, and mild steel blank casing above the groundwater table. To induce hydraulic containment of the plume, during times of drought (such as the current condition where groundwater levels are near historical lows), each well will be pumped at approximately 175 gallons per minute (gpm), which amounts to about 1,050 gpm for the total extraction system. When groundwater levels rise in the future, pumping rate anticipated for individual wells is approximately 350 gpm, for a total maximum treatment system load of about 2,100 gpm. Groundwater pumping within the wells will be automated using level-actuated controllers to assure that optimal pumping rates will be achieved. The well extraction system will be monitored and operated via telemetry, which will be controlled by radio connection from the County Solid Waste Management Division.

The City of Rialto has identified that the maximum pumping rate of CR-3 is approximately 1,850 gpm. While the extraction/treatment system is designed for 2,100 gpm, the County proposes for the City to decrease the pumping rates of CR-3 to approximately 850 gpm, with the extraction/treatment system providing approximately 1,000 gpm of water, to replace the City's reduced rates. The County's groundwater modeling identifies that the City's reduced pumping rates of CR-3 will not impact plume movement and extraction/treatment system performance.

After pumped water is delivered to the ground surface, water will be conveyed via a pipeline header system to a water treatment plant. The pipeline will be within ROW of Linden Avenue and will extend to the treatment plant located approximately 650 feet southeast of the extraction wells. The treatment plant would occupy a footprint of approximately 2,500 square feet. The VOCs will be treated using granular activated carbon (GAC) as a filter media where VOCs would bind to carbon particles. Perchlorate will be treated using ion-exchange columns to "bind" perchlorate to specially formulated resins. Spent carbon and resins will be periodically removed, replaced and transported off site to an approved, licensed hazardous waste facility. There will be no brine disposal needs. The treatment plant will be operated to yield non-detectable concentrations of perchlorate and VOCs.

Once contaminants are removed, the treated water will be disinfected and readied for delivery to the City's water supply system. Routine water quality testing will be performed to monitor contaminant removal and to verify the adequacy of treated water for distribution to the City.

Per the RWQCB Order, the system will be operational by April 1, 2005. However, in the event that the system is not yet fully functional by April 1, 2005, the County proposes to purchase and deliver supplemental water that meets drinking water standards for the City of Rialto until such time the treatment system is operational. The County intends to supply replacement water in the amount not less than the proposed extraction system production of 1,000 gpm to the City of Rialto, regardless if perchlorate and VOC sampling for CR-3 are still negative.



Proposed Well Extraction Array and Water Treatment System

City of Rialto, California

LILBURN CORPORATION

Figure 3

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

- Federal: none;
- State of California: Regional Water Quality Control Board – Santa Ana Region (no permit, order for compliance only); Department of Health Services;
- County of San Bernardino: none
- Local: City of Rialto, Development Review and Building and Safety permits.

EVALUATION FORMAT

This initial study is prepared in compliance with the California Environmental Quality Act (CEQA) Guidelines. This format of the study is presented as follows. The project is evaluated based upon its effect on seventeen (17) major categories of environmental factors. Each factor is reviewed by responding to a series of questions regarding the impact of the project on each element of the overall factor. The Initial Study Checklist provides a formatted analysis that provides a determination of the effect of the project on the factor and its elements. The effect of the project is categorized into one of the following four categories of possible determinations:

Potentially Significant Impact (4)	Less than Significant with Mitigation (3)	Less than Significant (2)	No Impact (1)

Substantiation is then provided to justify each determination. One of the four following conclusions is then provided as a summary of the analysis for each of the major environmental factors.

1. Therefore, no impacts are identified or anticipated and no mitigation measures are required.
2. Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.
3. Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as a condition of project approval to reduce these impacts to a level below significant. The required mitigation measures are: (List mitigation measures)
4. Significant adverse impacts have been identified or anticipated. An Environmental Impact Report (EIR) is required to evaluate these impacts, which are: (List the impacts requiring analysis within the EIR).

At the end of the analysis the required mitigation measures are restated and categorized as being either self-monitoring or as requiring a Mitigation Monitoring and Reporting Program.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology /Soils
☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality	☐ Land Use/ Planning
☐ Mineral Resources	☐ Noise	☐ Population / Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities / Service Systems	☐ Mandatory Findings of Significance	

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

☒ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Michael R. Perry 10/22/04
Signature Michael R. Perry, Senior Project Manager Date
Lilburn Corporation (Preparer)

Randy Scott 10/22/04
Signature Randy Scott Date
County of San Bernardino Land Use Services Department

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
I. AESTHETICS — Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

SUBSTANTIATION (check __if project is located within the viewshed of any Scenic Route listed in the General Plan):

I a) The well extraction system to include up to eight wells will be constructed on Rialto Municipal Airport property. The treatment plant would be constructed on a City-owned parcel just outside of the airport property and adjacent to well CR-3. The proposed project is not located within a designated Scenic Corridor and will not have a substantial adverse effect. The site will not have an impact on a scenic vista, as there are none identified within the vicinity of the project site that would be affected by the proposed remedial action project.

I b) The proposed remedial action project will not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway, because the site is not adjacent to a state scenic highway and there are no trees, rock outcroppings, or historic building on the project site.

I c) The proposed project will be constructed within and adjacent to the Rialto Municipal Airport. The project will not substantially degrade the existing visual character or quality of the site and its surroundings. The project includes the installation and operation of up to eight extraction wells to be located adjacent to an existing runway. The extraction wells will be construction in below ground vaults and capped. The proposed treatment plant will be located on a footprint of approximately 2,500 square feet approximately 650 feet south of the proposed well extraction site on a portion of property presently occupied by CR-3. The proposed well extraction system and treatment plant will be consistent with the existing visual character of the area, which includes metal industrial-type tilt up buildings and related airport service buildings. The remaining portion of the project is proposed within an area located just outside of the airport property, and has a land use designation of Industrial Park. Both areas are zoned as Planned Industrial Development. Existing single-family residences occur ¼-mile west of the project site, and are located a sufficient distance from the project site that they would not be impacted by the proposed project.

I d) The proposed project will be constructed within and adjacent to the Rialto Municipal Airport. The airport contains several existing sources of light emissions. The proposed wells would be constructed adjacent to runway 6L-24R. The runway currently uses several sources of light including: edge lights, runway end identifier lights, and security flood lights. The treatment plant would not be lighted. The proposed project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area, because this site is already developed and includes an existing source of light.

Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
II. AGRICULTURE RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

SUBSTANTIATION (check __ if project is located in the Important Farmlands Overlay):

According to Figure II-2 within the City of Rialto's General Plan, the site and surrounding properties have a land use designation of Public Use and Industrial Park, and are zoned Planned Industrial Development. The nearest area designated for agricultural use is located along Randall Avenue just east of Cactus Avenue, approximately three miles southeast of the project area.

II a) The project area has not been identified or designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Currently, there are no agricultural uses within the vicinity of the project area.

II b) A portion of the project is proposed within the Rialto Municipal Airport property and is designated Public Use. The remaining portion of the project is proposed within an area located just outside of the airport property, and has a land use designation of Industrial Park. Both areas are zoned as Planned Industrial Development. The proposed project and its locations would not conflict with any agricultural land use or Williamson Act land conservation contract.

II c) The proposed project does not involve other changes in the existing environment which, due to its location or nature, could result in conversion of Prime Farmland, to a non-agricultural use.

Therefore, no impacts are identified or anticipated and no mitigation measures are required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
III. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

SUBSTANTIATION :

The project site is located in the South Coast Air Basin (SCAB). The South Coast Air Quality Management District (SCAQMD) has jurisdiction over air quality issues and regulations within the SCAB. To assist local agencies to determine if a project's emissions could pose a significant threat to air quality, the SCAQMD has published its CEQA Air Quality Handbook (CEQA Handbook).

Chapter 6 of the CEQA Handbook provides methods of screening projects to determine if the construction and operation of the project will result in the emission of pollutants that exceed the SCAQMD's thresholds of significance. The first step in the screening process is to consult the CEQA Handbook's Screening Tables 6-2 and 6-3 to determine if the project has the potential to result in emissions that exceed the SCAQMD's thresholds of significance.

III a) The project will not conflict with or obstruct implementation of the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMD), because the AQMP was developed for the primary purpose of controlling emissions to maintain all federal and state ambient air standards for the district.

III b) The proposed project would include drilling activities at the site proposed for up to eight wells, and minor grading at the site proposed for the treatment plant. These construction activities will emit fugitive dust from the site. However, total area proposed for earth disturbance is small and would be less than one acre. The proposed well site would require minor demolition/removal of the existing asphalt and minor regrading on less than one acre. Proposed construction/demolition activities will be minimal and will not generate significant PM_{10} contamination.

Table 6-3 of the Handbook identifies grading of three acres per day as having a potential to exceed the SCAQMD threshold for construction related emissions. The entire project area, including the site located within the Rialto Municipal Airport adjacent to runway 6L-24R and the city-owned parcel located off site of airport property, is less than one acre and therefore, it falls below the SCAQMD threshold. Standard dust practices will be conducted at the site, and the County's construction documents will require the contractor(s) to apply water at least twice a day to disturbed portions of the project site and at any time when wind blown dust is observed migrating from the site during construction activities. Water will also be applied at the end of the work day preceding any weekends and holidays until construction activities cease.

Emissions associated with vehicle trips will be the same as under existing conditions since construction of the wells and treatment plant would not result in an increase in vehicle trips. Similarly, post-construction activities will include only monitoring and maintenance of the wells and treatment plant. Therefore there are no impacts after project completion.

III c) Construction and operation of the well extraction system and treatment plant would not significantly increase traffic either locally or regionally, and therefore will not result in significant increases in vehicular air emissions.

III d) Any increase in air quality emissions produced as a result of well and treatment plant construction, will be short-term and will cease once construction is complete. Application of water, as required in the County's construction documents, will reduce 50 to 75 percent of fugitive dust emissions during construction. The proposed project will not expose sensitive receptors to substantial pollutant concentrations during construction or operation because the nearest sensitive receptor, single-family residential, is located a sufficient distance, approximately 1,350 feet west of the project site, and will not be exposed to any substantial pollutant concentrations. Operation of the treatment plant will be consistent with existing uses, onsite and in the immediate vicinity.

III e) The proposed project, an extraction well system and treatment plant, will not generate emissions that would cause objectionable odors.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
IV. BIOLOGICAL RESOURCES — Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

SUBSTANTIATION (check ____if project is located in the Biological Resources Overlay or contains habitat for any species listed in the California Natural Diversity Database _):

According to the City of Rialto's General Plan Final Environmental Impact Report, potential biological habitat areas in the City have been highly disturbed due to development and growth. Certain areas above Base Line Road and near the Agua Mansa area still support a variety of natural grasses, annuals, and small shrubs.

IV a) Prior to the construction of runway 6L-24R, two focused biological surveys were conducted for the coastal California gnatcatcher and the San Bernardino kangaroo rat, and two plant species, the Santa Ana River woollystar, and the slender-horned spine-flower. The project site was found to contain appropriate habitat for the Coastal California gnatcatcher, and the San Bernardino kangaroo rat. However, following appropriate protocol surveys for both species, no individuals were detected or trapped. It was concluded that neither species occupied the site.

No suitable habitat for the Santa Ana woollystar was found, and no slender-horned spineflower were found within the proposed runway area. Based upon the two forced biological surveys prepared for the runway area, and the current developed state of the area, no species listed as threatened or endangered are expected to have established on-site. Therefore, the project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. The treatment plant will be constructed on property that is fully disturbed and developed.

IV b) The extraction wells will be constructed within the Rialto Municipal Airport. The treatment plant will be constructed just outside of the airport property on City-owned land. No riparian habitat occurs on or near the project area. Therefore, the project will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service because the project site is has been previously graded and is totally disturbed and developed.

IV c) This project will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means, because the project is not within an identified protected wetland, nor near any drainage.

IV d) This project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, because there are no such corridors or nursery sites within or near the project site.

IV e) This project will not conflict with any local policies or ordinances protecting biological resources, as the site has been previously disturbed and there are no identified biological resources that are subject to such regulation.

IV f) This project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, because no such plan has been adopted in the area of the project site.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
V. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

SUBSTANTIATION (check if the project is located in the Cultural__or Paleontologic ___ Resources overlays or cite results of cultural resource review):

V a) The project site is located within and adjacent to the Rialto Municipal Airport within the City of Rialto. In 1990, a comprehensive inventory of historic resources built before 1946 was completed for the City. The 1990 Final Report of the City of Rialto Historic Resources Survey identified 114 structures as being historically significant and eligible for listing in the National Register. The report also identified two eligible historic districts including a residential area located at North Date Street and Olive Street; and a citrus ranch located on South Cactus Avenue. Both historic districts are located over two miles southeast of the project site. This project will not cause a substantial adverse change in the significance of a historical resource, because the project site is not located within and adjacent to a history resource, and no such resources have been identified on-site.

V b) According to the City of Rialto's General Plan Figure IX-1, Historic/Archaeological Resources Sensitivity, the project site has low potential for yielding any historic or archaeological resources. This proposed project will not cause a substantial adverse change to an archaeological resource, because there are no such resources identified on the site.

V c) The project site, as most of the area within the City of Rialto, is comprised predominantly of unconsolidated alluvium. The alluvium is derived from granitic rock of the San Gabriel and San Bernardino Mountains that has been deposited by Lytle Creek. Granitic material of this type has very little potential for paleonotologic resources. Similarly, the project site is located within and adjacent to the Rialto Municipal Airport and has not previously been identified as having any unique geologic features.

V d) - Since the project site is located within and adjacent to the Rialto Municipal Airport, it is highly unlikely that human remains will be encountered as a majority of the site was disturbed by past grading activities and is currently paved. It is unlikely that the narrow strip of land proposed for the well extraction system, and the proposed 2,500 square-foot area for the aboveground treatment plant adjacent to CR-3, would contain human remains; therefore no mitigation measures are recommended.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
VI. GEOLOGY AND SOILS — Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist -Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 181-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

SUBSTANTIATION (check _____ if project is located in the Geologic Hazards Overlay District):

The City of Rialto is located in a tectonically active region near the boundary of two major crustal plates. This boundary (between the Pacific and American Plates) is generally marked by the San Andreas Fault Zone, which extends through the northeastern portion of the City, and exhibits a right strike-slip movement. The Pacific Plate moves relatively northwest with respect to the continent. This active tectonic environment has strongly influenced the geologic history of the region.

The major structural features in the Rialto area are the three faults associated with the San Andreas Fault System including, the San Jacinto Fault, the Gen Helen Fault, and the Lytle Creek Fault.

The City of Rialto is located in a portion of the Upper Santa Ana Valley on the gently sloping Lytle Creek alluvial fan. Soils in the area include generally deep well-drained sands, sandy loams, and silty loams, and silty loams on level alluvial valley floors; and shallow excessively drained sandy loams and rock outcroppings.

VI a) According to Figure 4.2-3 within the City of Rialto's General Plan, the project site and surrounding area does not occur within an earthquake special study zone or near any potentially active faults. Construction and operation of the well extraction system and treatment plant would not expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, ground failure or landslides, because the project will not include the construction of any habitable structures which could fail during a seismic event.

VI b) – Construction of the well extraction system and treatment plant will not result in substantial soil erosion or the loss of topsoil, because the areas proposed for use have been graded and maintained to promote proper drainage.

During drilling and grading, erosion will be controlled via the Erosion Control Plan, making an potential impacts less than significant.

VI c) – Liquefaction is a process whereby strong earthquake shaking causes sediment layers that are saturated with groundwater to lose strength and behave as a fluid, which can lead to ground failure. Ground saturation of sediments is required in order for earthquake induced liquefaction to occur. According to City of Rialto General Plan, liquefaction is unlikely to occur in most portions of the City, with the exception of the area located near the Lytle Creek Wash, where there are sandy soils and a high water table. The project area is located approximately two miles south of the Lytle Creek Wash.

VI d) According to City of Rialto General Plan Figure 4.2-1, on-site soils are classified as Tujunga (TvC). These soils are not considered expansive in nature. Approval of construction plans will ensure adequate mitigation for the proposed project.

VI e) The proposed project is the construction and operation of a well extraction system and treatment plant, and does not include the construction or use of any septic tanks or alternative waste water disposal systems. No impacts would result.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
VII. HAZARDS AND HAZARDOUS MATERIALS — Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

SUBSTANTIATION: (check ____ if project is located in the Fire Hazards Overlay – _____)

Perchlorate (ClO4-) is an anion that occurs as ammonium, potassium, magnesium or sodium salts. These perchlorate salts bind weakly to soil particles and are not significantly broken down in the environment. In water, however, perchlorate salts are extremely soluble and highly mobile.

While the potential risks associated with perchlorate on humans are not completely known, public health concerns are currently focused on its potential effect on thyroid function. Perchlorate is known to impair normal thyroid function because it is taken up preferentially by the thyroid gland in place of idiode. The thyroid gland is therefore deprived of iodide, making the thyroid hormone inactive. As a result, perchlorate can disrupt hormone levels in the body which are crucial for healthy metabolism, growth and development. The California Department of Health Services has completed a draft toxicity assessment for perchlorate that identifies a maximum drinking water concentration of 6 micrograms per liter.

Similarly, VOCs, particularly trichloroethylene (TCE), is a suspected human carcinogen that can affect and damage several human organs and systems including the central nervous system, respiratory system, liver, kidneys, and heart, and may cause contact dermatitis of the skin. Both the United States Environmental Protection Agency (USEPA) and the California Department of Health Services have established primary MCL of 5 micrograms per liter for TCE.

On January 17, 2003, the Regional Road adopted Cleanup and Abatement Order (CAO) No. R8-2003-0013 for the County of San Bernardino. The Order required the County to investigate the discovery of perchlorate being discharged to groundwater from the County's property located adjacent to the MVSL located in the City of Rialto. CAO No. R8-2003-0013 required the County to defined the lateral and vertical extent of the perchlorate that was discharging from its property, and to cleanup and abate the effects of the discharge.

Subsequently, the County performed a series of groundwater investigations and found that perchlorate was detected throughout the upper 200 feet of groundwater at 26 parts per billion (ppb), and at 7.5 ppb at about 200 feet below the water table, in a bolehole drilled approximately 250 feet up gradient of well CR-3. Samples obtained monthly from well CR-3 have not detected perchlorate.

VII a) The proposed project includes the construction and operation of a plume interception groundwater extraction system to include up to eight wells and a treatment plant. Construction activities will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, because construction will not involve such activities. During operation of the treatment plant, spent carbon and resins used to bind perchlorate and VOCs, will be removed, replaced and transported off site for appropriate disposal by licensed facilities. Since perchlorate and TCE are only soluble in water, removal of spent carbon and resin materials with attached perchlorate and TCE will be considered non-hazardous and will be disposed of in accordance with applicable regulations.

VII b) The project will not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, because

construction and operations of the extraction system will not involve the use of hazardous materials. Spent carbon resins will be periodically removed, and transported off site to be disassembled and disposed of by trained firms licensed for this work.

VII c) The project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, because the project does not propose the use of hazardous materials and all existing and proposed schools are more than one-quarter mile away from the project site. The nearest school is located at the northwest corner of Locust Avenue and Montgomery Avenue approximately ¾-mile southwest of the project site.

VII d) The project site is located within and adjacent to the Rialto Municipal Airport. According to the City of Rialto Fire Department, there are no records of incidence for the project site. Therefore, construction/operation of the proposed project would not disturb any hazardous materials on-site.

VII e-f) The proposed extraction wells, to be located adjacent to runway 6L-24R of the Rialto Municipal Airport, will be constructed below ground level and capped. The system will be operated and monitored by telemetry, which will be controlled by radio connection from San Bernardino County Solid Waste Management Division.

The treatment plant will be located approximately 650 feet south of the wells and off site of the Rialto Municipal Airport property. The Federal Aviation Agency (FAA) has been contacted regarding the project and indicated that an Air Space Determination will be conducted to determine if construction of the project (e.g. use of well drilling equipment) will impose safety concerns at the airport. An objection or non-objection to the project will be submitted in the form of a letter to the County of San Bernardino Solid Waste Management Division. Coordination with the FAA will ensure that the proposed project will not create a safety hazard for people residing or working in the project area.

VII g) The FAA has been contacted regarding the project and indicated that an Air Space Determination will be required to ensure the project would not impose safety concerns at the airport. An objection or non-objection to the project will be submitted in the form of a letter to the County of San Bernardino Solid Waste Management Division. Coordination with the FAA will ensure that the proposed project will not interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, no impact would result.

VII h) The project will not expose people or structures to a significant risk of loss, injury or death involving wildland fires. The project site is located within and adjacent to the Rialto Municipal Airport and currently paved and has sufficient topography to act as a barrier between the extraction system and any wildland fire.

Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
VIII. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level, which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

SUBSTANTIATION:

Investigations of groundwater recently completed by the County of San Bernardino indicate that perchlorate and VOCs are migrating in groundwater toward CR-3 from areas adjacent to the County's MVSL. At least in part, these source areas were once part of the Rialto Ammunition Back-up Storage Point (RABSP) that was used during World War II to store munitions and where subsequent commercial and industrial activities may have resulted in the release of perchlorate and VOCs, specifically TCE, to groundwater. Well CR-3 provides a significant portion of the City of Rialto's municipal supply needs (reportedly up to 1,850 gallons per minute [gpm]).

Following detection of perchlorate and VOCs in samples from groundwater monitoring wells adjacent to the MVSL, the County of San Bernardino completed a three-phase investigation to evaluate the nature and extent of these groundwater impacts and to identify an appropriate remedial response to the observed conditions. The focused DIRI/FS for groundwater impacts involved installation of 18 groundwater monitoring wells downgradient of the interpreted source areas, and retention and analyses of groundwater samples from discrete groundwater zones.

The data collected for the remedial investigation indicated that groundwater upgradient of CR-3 has been impacted by perchlorate and a variety of VOCs, the most significant of which is TCE. While perchlorate and VOCs have not been detected in samples taken directly from CR-3, these contaminants exceed state and federal maximum contaminant levels (MCLs) and/or action levels (ALs) in shallow water (approximately 400 to 500 feet

bgs) in the immediate vicinity of the well. Well CR-3 is screened at a depth of 1,000 bgs. As a result, it is concluded that these impacts represent a current threat to the City of Rialto's water supply at CR-3.

The hydrochemistry of groundwater near CR-3 has been extensively characterized. While a variety of soil types have been identified in the groundwater zone beneath the site including sandy gravels, gravelly sands, silty sands, and silts, plume migration has paralleled the groundwater and stratigraphic gradients to the southeast and has developed a relatively long and narrow "cigar shape" distribution. In the absence of remedial actions, a strong potential exists for continued plume migration further downgradient within the groundwater basin. In contrast, site specific characteristics indicate that there is an opportunity to contain the release within a relatively shallow groundwater zone in the immediate vicinity of CR-3.

VIII a) The project will not violate any water quality standards or waste discharge requirements, because the project will be served by established water and wastewater purveyors that are subject to independent regulation by local and state agencies that ensure compliance with both water quality and waste discharge requirements. The project is in response to a CAO issued by RWQCB.

VIII b) The proposed project is the construction of a plume interception groundwater extraction system to include up to eight wells spaced approximately 400 feet on center across the width of the identified plume. As conceptually designed, the well array would be positioned approximately perpendicular to the plume migration path and parallel to the City's airport runway alignment just upgradient of CR-3. Extraction wells would be constructed to a depth of approximately 525 feet using eight-inch diameter stainless steel well screen in the anticipated producing zone, and mild steel blank casing above the groundwater table. To induce hydraulic containment of the plume, during times of drought (such as the current condition where groundwater levels are near historical lows), each well would be pumped at approximately 175 gallons per minute (gpm), which amounts to about 1050 gpm for the total extraction system. When groundwater levels rise in the future, pumping rate anticipated for individual wells is approximately 350 gpm, for a total maximum treatment system load of about 2,100 gpm. Groundwater pumping within the wells would be automated using level-actuated controllers to assure that optimal pumping rates would be achieved. Once the system is installed, or by April 1, 2005, the City of Rialto must reduce its pumping rates of CR-3 to a level that modeling identifies will not promote plume movement. The County will provide replacement water to off-set CR-3's decreased pumping, either through the pump and treat system or by purchasing other municipal water for delivery to the City.

After pumped water is delivered to the ground surface, water would be conveyed via a pipeline header system to a water treatment plant. The treatment plant would employ widely used technologies to remove perchlorate and VOCs.

Although the proposed project would remove water, groundwater supplies would not be substantially depleted, because once contaminants were removed, the treated water would be disinfected and readied for delivery to the City's water supply system. The proposed project would minimize impacts to the regional groundwater resource by limiting the potential for additional contamination migration. In addition, it would protect the resource providing water to the City of Rialto water supply at CR-3. As required by the Executive Officer of the Regional Water Quality Control Board, and as amended by adoption of CAO R8-2004-0072, the County is required to 1) take all actions necessary to provide replacement water that is non-detected for perchlorate to the City of Rialto by April 1, 2005, to replace the water currently extracted from CR-3; 2) shall the proposed plan not be implemented the County shall submit an alternative plan no later than November 15, 2004 for approval; and 3) in the event that percholrate is detected above the State Department of Health Services Detection Limit or Reporting in well CR-3 prior to County being able to provide replacement water to the City of Rialto, the County shall immediately provide water by other reasonable means. Since "non-detect" is a laboratory-specific determination, for the purpose of the RWQCB Order "non-detect" is defined as a water quality treatment design standard equivalent to the standards by which Rialto's perchlorate treatment systems are designed.

VIII c) The project will not substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site,

because the project does not propose any substantial alteration to a drainage pattern, stream or river and the project is required to submit and implement an erosion control plan.

VIII d) The project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, because the project does not propose any substantial alteration to a drainage pattern, stream or river.

VIII e) The project will not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, because the project is located adjacent to a runway within the Rialto Municipal Airport that is currently serviced by existing drainage. There will be adequate capacity in the local and regional drainage systems so that downstream properties are not negatively impacted by any increases or changes in volume, velocity or direction of stormwater flows originating from or altered by the project.

VIII f) – The project will not otherwise substantially degrade water quality, because appropriate measures relating to water quality protection, including erosion control measures have been required.

VIII g) The project will not place unprotected housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, because no housing is proposed or within the project area.

VIII h) According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, the project site lies in "Zone X," which designates "areas of 500-year flood; areas of 100-year flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from 100-year flood." The proposed project would not expose people or habitable structures to any related flood hazards.

VIII i) The project will not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, because the project site is not within any identified path of a potential inundation flow that might result in the event of a dam or levee failure or that might occur from a river, stream, lake or sheet flow situation.

VIII j) The project will not be impacted by inundation by seiche, tsunami, or mudflow, because the project is not adjacent to any body of water that has the potential of seiche or tsunami nor is the project site in the path of any potential mudflow.

Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
IX. LAND USE AND PLANNING — Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

SUBSTANTIATION:

IX a) The project will not physically divide an established community, because the project is located within and adjacent to the Rialto Municipal Airport. Surrounding land uses include airport related businesses to the north, vacant land to the south, Linden Avenue and commercial development to the west, and airport related businesses and vacant land to the east. The nearest sensitive receptor, single-family residential development, is located on the southeast and west corners of North Maple Avenue and Miro Way, approximately 1,350 feet west of the project site.

IX b) Proposed wells will be located adjacent to runway 6L-24R of the Rialto Municipal Airport. The treatment plant will be located approximately 650 feet south of the wells and off site of the Rialto Municipal Airport property. The FAA has been contacted regarding the project and indicated that a permit will not be required. However, proposed structures to be used during the construction and operation of the extraction system will require an Air Space Determination which will evaluate the project for FAA regulation compliance. An objection or non-objection to the project will be submitted in the form of a letter to the County of San Bernardino Solid Waste Management Division. Coordination with the FAA will ensure that the proposed project will comply with all applicable regulations.

The project will not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect, because the project is consistent with all applicable land use policies and regulations of the County Code and General Plan.

IX c) The project is located within and adjacent to the Rialto Municipal Airport. The project will not conflict with any applicable habitat conservation plan or natural community conservation plan, because there is no habitat conservation plan or natural community conservation plan within the area surrounding the project site and no habitat conservation lands are required to be purchase as mitigation for the proposed project.

Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
X.MINERAL RESOURCES — Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

SUBSTANTIATION (check ___ if project is located within the Mineral Resource Zone Overlay):

X a) According to Figure X-2 within the City's General Plan, the project and surrounding area, do not contain any regionally significant mineral resources. Therefore, the project will not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, because there are no identified important mineral resources within the project area.

X b) The project will not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan, because there are no identified locally important mineral resources within the project area.

Therefore, no impacts are identified or anticipated and no mitigation measures are required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
XI. NOISE — Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

SUBSTANTIATION (check if the project is located in the Noise Hazard Overlay District ____ or is subject to severe noise levels according to the General Plan Noise Element __):

XI a) A portion of the project will occur within the Rialto Municipal Airport property adjacent to runway 6L-24R. The remaining portion of the project will be located on a city-owned parcel located outside of the airport property on the east side of Linden Avenue. Noise contours were developed for the airport using the Federal Aviation Administration's Integrated Noise Model. The 65-CNEL contour extends slightly across the airport's northern, southern, and western boundaries. According to the Rialto Airport Specific Plan, these areas are zoned for Planned Industrial Development. No residential units lie within this portion of the 65-CNEL. An eastern lobe of the 65-CNEL extends into land zoned for single-family residential development. However, this land is planned for flood control detention basins; therefore no housing will occur there. Construction of the well extraction system and treatment plant may increase the ambient noise levels in the area. However, noise impacts will be short-term and will cease after construction. Operation of the wells and treatment plant will not generate noise in excess of existing noise levels currently generated by the airport.

XI b) Well construction will include drills and equipment that will generation groundborne vibration and/or groundborne noise. However impacts would be short-term and would cease upon construction completion. The proposed project would be required to comply with the vibration standards of the City of Rialto Development Code. Operation of the well extraction system and treatment plant will not create vibration that would exceed City standards.

XI c) The project will not generate a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, because no noise exceeding City standards is anticipated.

XI d) The project will not generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, because the project will be required to comply with the noise standards of the City of Rialto Development Code.

XI e) A portion of the project will occur within the Rialto Municipal Airport property adjacent to runway 6L-24R. The remaining portion of the project will be located on a city-owned parcel located outside of the airport property on the east side of Linden Avenue adjacent to well CR-3. Construction of the well extraction system and treatment plant may increase the ambient noise levels in the area. However, noise impacts will be short-term and will cease after construction. Operation of the wells and treatment plant will not generate noise in excess of existing noise levels currently generated by the airport and the existing well CR-3.

XI f) The project is not within the vicinity of a private airstrip.

Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
XII. POPULATION AND HOUSING — Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SUBSTANTIATION:

XII a) The proposed project is the construction and operation of a plume interception groundwater extraction system to include up to eight extraction wells and an above-ground treatment plant. Construction of the wells and treatment plant will be short-term and will not create any new long-term jobs. Similarly, operation of the extraction system will not create a substantial amount of new jobs and therefore would not contribute to population growth in an area either directly or indirectly.

XII b) The project site is located within and adjacent to the Rialto Municipal Airport. The proposed well extraction system will be located adjacent to existing runway 6L-24R, and the treatment plant will be located approximately 650 feet southwest of the wells. The proposed use will not displace any existing housing units, because no housing units are proposed to be demolished as a result of the proposed project.

XII c) The proposed project will not displace any people, or necessitate the construction of replacement housing elsewhere, because the project will not displace any existing housing or existing residents.

Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
XIII. PUBLIC SERVICES —				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

SUBSTANTIATION:

XIII a) The proposed project is the construction and operation of a plume interception groundwater extraction system to include up to eight wells and an above-ground treatment plant. Construction of the wells and treatment system will be short-term and would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities. The project site is within an existing urbanized area, and is located within and adjacent to the Rialto Municipal Airport which is currently serviced by the City of Rialto Fire and Police Department. The proposed project would not impact existing service ratios, response times or other performance objectives for any of the public services, including fire and police protection, schools, parks or other public facilities.

Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
XIV. RECREATION —				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

SUBSTANTIATION:

XIV a) The proposed project will not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, because the project will not generate any new residential units or create a substantial number of new jobs either during construction or operation of the proposed project.

XIV b) The proposed project is the construction and operation of a well extraction system and treatment plant, and does not include the construction or expansion of recreational facilities.

Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

XV. TRANSPORTATION/TRAFFIC — Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☒
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

SUBSTANTIATION:

XV a) The proposed project is the construction and operation of a groundwater extraction system to include up to eight wells and an above-ground treatment plant. Construction of the wells and treatment system will be short-term and would not result in substantial increase in traffic. Construction equipment will likely remain on-site until construction activities are complete.

XV b) The proposed project is the construction and operation of a groundwater extraction system to include up to eight wells and an above-ground treatment plant. Construction of the wells and treatment system will be short-term and would not result in substantial increase in traffic. Similarly, the project will not exceed, either individually or cumulatively, a level of service (LOS) standard established by the county congestion management agency for designated roads or highways.

XV c-e) The FAA has been contacted regarding the project and indicated that a permit will not be required. However, proposed structures to be used during the construction and operation of the extraction system will require an Air Space Determination which will evaluate the project for safety concerns. An objection or non-objection to the project will be submitted in the form of a letter to the County of San Bernardino Solid Waste Management Division. Coordination with the FAA will ensure that the proposed project will not create a safety hazard.

XV f) The proposed project will not result in inadequate parking capacity, because the project will not require parking.

XV g) The project will not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks), because none occur within either of the proposed areas, and none are planned as part of the proposed project.

Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS — Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

SUBSTANTIATION:

XVI a) On January 17, 2003, the Regional Road adopted Cleanup and Abatement Order (CAO) No. R8-2003-0013 for the County of San Bernardino. The Order required the County to investigate perchlorate being discharged to groundwater from the County's property located adjacent to the MVSL located in the City of Rialto. CAO No. R8-2003-0013 required the County to define the lateral and vertical extent of the perchlorate that was discharging from its property, and to cleanup and abate the effects of the discharge.

Implementation of the proposed project will comply with RWQCB Order R8-2004-0072.

XVI b) The proposed project will not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities.

XVI c) The proposed project will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities that cause significant environmental effects.

XVI d) As stated in CAO R8-2004-0072 Item 5 (c), in the event that perchlorate is detected above the State Department of Health Services Detection Limit or Reporting (DLR) in well CR-3 prior to the County being able to provide replacement water on April 1, 2005 to the City of Rialto, the County shall immediately provide water by other reasonable means. Since the RWQCB adopted CAO R8-2004-0072, no additional mitigation measure is required**.**

XVI e) The proposed project will not result in wastewater generation. Therefore, no impact would result to any wastewater treatment provider.

XVI f) The proposed project includes the construction and operation of a well extraction system and treatment plant. Demolition of asphalt near the runway would be a one-time occurrence. Post-construction activities to include the removal and replacement of resin materials, would not generate a substantial amount of additional solid waste.

XVI g) Operation of the treatment plant would require the use of granular activated carbon as a filter media where VOCs would bind to carbon particles. Perchlorate may be treated using ion-exchange columns to "bind" perchlorate to specially formulated resins. Spent carbon and resins would be periodically removed, replaced and transported off site to approved, licensed facilities. There will be no brine disposal needs. The proposed project is required to comply with federal, state, and local statutes and regulations related to solid waste.

Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE—				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause Substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

SUBSTANTIATION:

XVII a) Prior to the construction of runway 6L-24R, two focused biological surveys were conducted for the coastal California gnatcatcher and the San Bernardino kangaroo rat, and two plant species, the Santa Ana River woollystar, and the slender-horned spine-flower. The project site was found to contain appropriate habitat for the Coastal California gnatcatcher, and the San Bernardino kangaroo rat. However, following appropriate

protocols for both species, no individuals were detected or trapped. It was concluded that neither species occupied the site.

No suitable habitat for the Santa Ana woollystar was found, and no slender-horned spineflower were found within the proposed runway area. Based upon the two forced biological surveys prepared for the runway area, and the current developed state of the area, no species listed as threatened or endangered is expected to have established on-site. Therefore, the project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

XVII b) The proposed project includes the construction and operation of a groundwater extraction system and treatment plant. The proposed action would minimize impacts to the regional groundwater resource by limiting the potential for additional downgradient contamination. In addition, it would protect the resource providing water to the City of Rialto water supply at CR-3 is protected. Implementation of the proposed project would comply with CAO R8-2004-0072 and would not result in cumulatively considerable impacts.

XVII c) The proposed project includes the construction and operation of a groundwater extraction system and treatment plant. No significant impacts from hazards, air emission, or noise are expected. The proposed action would minimize impacts to the regional groundwater resource by limiting the potential for additional downgradient migration. In addition, it would protect the resource providing water to the City of Rialto water supply at CR-3. Implementation of the proposed project would comply with CAO R8-2004-0072.

XVIII. MITIGATION MEASURES

(Any mitigation measures which are not 'self-monitoring' shall have a Mitigation Monitoring and Reporting Program prepared and adopted at time of project approval)

This Initial Study did not identify any potentially significant impacts. Therefore, no mitigation measures are required.

REFERENCES (List author or agency, date, title)

City of Rialto General Plan Update Final Master Environmental Impact Report, June 1992

City of Rialto General Plan, approved March 31, 1992.

Geologic Associates, September 2004, Draft Interim Remedial Action Plan Mitigation of Perchlorate and VOC Impacts to Groundwater, Rialto, California.

City of Rialto, November 1998, Environmental Assessment for Proposed Construction of Runway 6L-24R at Rialto Municipal Airport.

California Regional Water Quality Control Board – Santa Ana Region, Cleanup and Abatement Orders R8-2003-0017 and R8-2004-0072.

South Coast Air Quality Management District, November 1993, CEQA Air Quality Handbook.

ATTACHMENT A

Cleanup and Abatement Order
R8-2004-0072

California Regional Water Quality Control Board
Santa Ana Region

Order No. R8-2004-0072
Amending Cleanup and Abatement Order No. R8-2003-0013
For
County of San Bernardino, Solid Waste Management Division
City of Rialto, San Bernardino County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. On January 17, 2003, the Regional Board adopted Cleanup and Abatement Order (CAO) No. R8-2003-0013 for the County of San Bernardino (hereinafter County). Order No. R8-2003-0013 found that perchlorate was being discharged to groundwater from the County's property located adjacent to the actively landfilled portion of the Mid-Valley Sanitary Landfill (MVSL) in Rialto.

2. CAO No. R8-2003-0013 required the County to define the lateral and vertical extent of the perchlorate that was discharging from its property, and to cleanup and abate the effects of the discharge.

3. The County subsequently performed a series of groundwater investigations. In June 2004, the County obtained depth discrete samples from a borehole that was drilled approximately 250 feet up gradient of City of Rialto Well No. 3. Results of the sampling found that perchlorate was detected throughout the upper 200 feet of groundwater, ranging from 26 parts per billion (ppb) in a sample obtained at the water table, to 7.5 ppb at the end of the boring, approximately 200 feet below the water table.

4. Rialto Well No. 3 is sampled monthly and has been non-detectable for perchlorate.

5. Rialto Well No. 3 represents 15 percent of the City of Rialto's current demand and is an important facility in the City of Rialto's water system. The presence of perchlorate in groundwater as close as 250 feet up gradient of Rialto Well No. 3 represents a threat to the beneficial use of Rialto Well No. 3 as a municipal drinking water supply.

6. In a letter dated July 6, 2004, the Executive Officer directed the County to submit an acceptable water supply contingency plan for Rialto Well No. 3 by August 6, 2004. The County submitted a conceptual plan on July 26, 2004, and proposed to begin providing replacement water to the City of Rialto by September 14, 2005. In a letter dated August 6, 2004, the Executive Officer expressed support for the County's proposal, but stated that an alternate plan should be submitted if the proposed plan could not be relied upon to commence providing replacement

water by February 15, 2005. In a letter dated August 19, 2004, the County expressed its commitment to complete its preferred alternative by February 15, 2005. However, various legal and practical impediments exist to the County's ability to expeditiously complete its preferred alternative, notwithstanding the expressed commitment of the County to make all reasonable efforts to achieve that goal. Therefore, it is reasonable to require the County to complete its preferred alternative and to begin providing replacement water to the City of Rialto by April 1, 2005.

7. Due to the threat to the beneficial use of Rialto Well No. 3 as a municipal drinking water supply, it is appropriate to order the County to provide replacement water for Rialto Well No. 3.

8. On September 17, 2004, the Regional Board considered comments on proposed Order No. R8-2004-0072, the results of the County's investigations that have been completed, the County's remedial action alternatives the County's preferred alternative remedial action plan and on other relevant matters.

9. This action is being taken by a regulatory agency to enforce a water quality law. Such action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15321, Article 19, Division 3, Title 14, California Code of Regulations.

IT IS HEREBY ORDERED THAT:

1. Cleanup and Abatement Order No. R8-2003-0013 is amended by adding a new Item 5 and 6, to read as follows:

5. a. The County shall take all actions necessary to provide replacement water that is non-detect for perchlorate to the City of Rialto by April 1, 2005, to replace the water currently extracted from Rialto Well No. 3. Since "non-detect" is a laboratory-specific determination, for the purposes of this order, "non-detect" is defined as a water quality treatment design standard equivalent to the standards by which Rialto's perchlorate treatment systems are designed."

b. In the event the County proposes to implement a plan other than its plan dated July 26, 2004, the County shall submit its alternative plan no later than November 15, 2004 for approval by the Executive Officer.

c. In the event that perchlorate is detected above the State Department of Health Services Detection Limit for Reporting (DLR) in Rialto Well No. 3 prior to the County

being able to provide replacement water to the City of Rialto pursuant to implementation of its approved plan, the County shall immediately replace the water being extracted from Rialto Well No. 3 by other reasonable means to be approved by the Executive Officer, including, but not limited to, purchasing replacement water from other sources.

6. In the event that current perchlorate treatment design standards or current analytical detection levels change in the future, the Regional Board may reopen Order No. R8-2003-0013, as amended by Order No. R8-2004-0072, to consider changes to Items 5.a and 5.c.

2. All other provisions of CAO No. R8-2003-0013 shall remain unchanged. This amendment does not limit any additional cleanup or abatement activities that may be required as a result of the discharge of perchlorate by the County or from the County's property, and is only intended to provide for the immediate replacement of the production capacity of Rialto Well No. 3.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on September 17, 2004.

Gerard J. Thibeault
Executive Officer

ATTACHMENT B

Draft Interim Remedial Action Plan

NOTICE OF PUBLIC COMMENT PERIOD

DRAFT INTERIM REMEDIAL ACTION PLAN
MITIGATION OF PERCHLORATE AND VOC IMPACTS TO GROUNDWATER
RIALTO, CALIFORNIA

The RWQCB is the lead agency responsible for accepting public comment and approving the Draft Interim Remedial Information/Feasibility Study and Draft Interim Remedial Action Plan.

The RWQCB will officially begin to accept public comments on these documents from September 17, 2004 through **October 18, 2004**.

Comments should be submitted in writing to the:
Regional Water Quality Control Board
Attn: Kurt Berchtold
3737 Main Street, Suite 500
Riverside, CA 92501

Contacts:
Kurt Berchtold, RWQCB, (909) 782-3286
Community Involvement Coordinator, SWMD, (909) 386-8701

INFORMATION REPOSITORIES

RWQCB
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501
(909) 782-4130

San Bernardino County
Solid Waste Management
222 West Hospitality Lane Second Floor
San Bernardino, CA 92415
(909) 386-8701
(appointments recommended)
www.sbcounty.gov/wsd

Rialto Branch Library
251 West 1st. Street
Rialto, CA 92376
(909) 875-0144

GeoLogic Associates
Geologists, Hydrogeologists and Engineers

DRAFT INTERIM REMEDIAL ACTION PLAN
MITIGATION OF PERCHLORATE AND VOC IMPACTS TO GROUNDWATER
RIALTO, CALIFORNIA

Background

This Draft Interim Remedial Action Plan (DIRAP) was prepared to support mitigation of perchlorate and volatile organic compound (VOC) impacts to groundwater which currently threaten regional groundwater resources upgradient of the City of Rialto's water supply Well No. 3 (CR-3). Well CR-3 provides a significant portion of the City of Rialto's municipal supply needs (reportedly up to 1850 gallons per minute [gpm]). This DIRAP is intended to inform and invite the public to participate in selection of the remedial response to impacted groundwater conditions near CR-3.

Investigations of groundwater recently completed by the County of San Bernardino indicate that perchlorate and VOCs are migrating in groundwater toward CR-3 from areas adjacent to the County's Mid-Valley Sanitary Landfill (MVSL). At least in part, these source areas were once part of the Rialto Ammunition Back-up Storage Point (RABSP) that was used during World War II to store munitions and where subsequent commercial and industrial activities may have resulted in the release of perchlorate and VOCs to groundwater.

Remedial Investigation

Following detection of perchlorate and VOCs in samples from groundwater monitoring wells adjacent to the MVSL, the County of San Bernardino completed a three-phase investigation to evaluate the nature and extent of these groundwater impacts and to identify an appropriate remedial response to the observed conditions. The focused Draft Interim Remedial Investigation / Feasibility Study (DIRI/FS) for groundwater impacts involved installation of 18 groundwater monitoring wells downgradient of the interpreted source areas, and retention and analyses of groundwater samples from discrete groundwater zones.

The data collected for the Remedial Investigation (RI) indicate that groundwater upgradient of CR-3 has been impacted by perchlorate and a variety of VOCs, the most significant of which is trichloroethene (TCE). While perchlorate and VOCs have not been detected in samples taken directly from Well No. 3, these contaminants exceed state and federal maximum contaminant levels (MCLs) and/or action levels (ALs) in shallow water (approximately 400 to 500 feet below ground surface) in the immediate vicinity of the well. As a result, it is concluded that these impacts represent a current threat to the City of Rialto's water supply at CR-3.

Although potential source areas for perchlorate and VOC impacts were identified as part of the RI work completed for this project, neither the DIRI/FS report nor this DIRAP are intended to address contaminated soils in the interpreted source areas. Instead, a separate DIRI/FS will later be prepared to characterize soil impacts and to evaluate alternative remedial measures that might be taken to mitigate that condition. Following preparation of the DIRI/FS for soil impacts, a separate DIRAP will be prepared to document the preferred

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soil mitigation alternative and to solicit public comment and participation in selecting an appropriate remedial response to those impacts.

Summary of Risks

In 1997, California's Department of Health Services found levels of perchlorate in drinking water wells throughout the State of California. While the potential risks associated with perchlorate on humans are not fully understood, public health concerns currently focus on the potential effect of the anion on thyroid function. California has established a draft toxicity assessment that identifies an Action Level (AL) for perchlorate in drinking water of 6 micrograms per liter (µg/L). Perchlorate can interfere with the iodide uptake of the thyroid gland which can result in decreased production of thyroid hormones, which are necessary for prenatal and postnatal growth and development, as well as for normal metabolism and mental function in adults.

In addition to perchlorate, TCE has been identified in groundwater at concentrations exceeding both the USEPA and California Department of Health Services Maximum Contaminant Levels (MCLs) of 5 µg/L. TCE is a suspected human carcinogen that can affect (and damage) several body organs and systems such as the central nervous system, respiratory system, liver, kidneys, and heart, and may cause contact dermatitis of the skin.

Remedial Alternatives

Based on the results of the RI, a Feasibility Study (FS) was completed to evaluate alternatives to mitigate impacted groundwater conditions upgradient of CR-3. Impacts are generally limited to the elevated concentrations of perchlorate and VOCs in the groundwater upgradient of CR-3. As part of the FS, and to develop criteria to evaluate the alternatives, Remedial Action Objectives (RAOs) were established. The level of allowable exposure considered in definition of the RAOs is defined by either the federal or state MCLs and ALs.

The RAOs developed to address groundwater impacts near CR-3 included:

- The selected alternative should prevent direct contact or ingestion by the public of groundwater containing contaminants that exceed MCLs or ALs.
- The preferred alternative should assure that replacement water is provided to the City of Rialto if MCLs or ALs are exceeded at well CR-3.
- The potential for further degradation of the aquifer downgradient of CR-3 should be minimized.
- The selected alternative should comply with state and federally mandated Applicable Relevant or Appropriate Requirements (ARARs).

Eight potential remediation alternatives were initially considered with respect to their anticipated ability to meet the RAOs. Those that could meet the RAOs were retained for further analysis. The alternatives included:

- No Action – This alternative presumes that groundwater impacts will not exceed MCLs and ALs at CR-3 in the future and as a result, no remedial action is necessary. Given the facts that existing and potential impacts in the immediate vicinity of CR-3 already exceed ALs, this alternative was not evaluated in detail.

- Direct Treatment of the Aquifer – This alternative involves use of an in-situ (below ground) biodegradation treatment technology to remove contaminants directly from the aquifer before groundwater flows to well CR-3. This process employs a large number (e.g., 50 to 100) wells and relies on a time-released inoculant substrate to produce an oxygen-deficient (anaerobic) environment that promotes microbial degradation of contaminants. This option was retained for detailed consideration.

- Aquifer Treatment by Recirculating Wells Upgradient of CR-3 – This alternative involves use of an extraction well array to intercept the plume. Pumped water would then be "inoculated" at the ground surface and reinjected to the aquifer to promote biodegradation of contaminants. This option was also retained for detailed consideration.

- Well-Head Treatment at CR-3 – This alternative involves construction and operation of a treatment plant at CR-3 to remove contaminants pumped from the well. Since analyses completed for this project indicate that pumping exclusively from CR-3 would not effectively contain the plume and could "pull" contaminants to greater depths in the aquifer, this alternative was not evaluated in detail.

- Replace CR-3 Water with a New Well – This alternative involves drilling and construction of a new water supply well in an area of the Rialto-Colton groundwater basin that is not threatened by contamination. This alternative would not result in any containment of the existing release and so, would not satisfy the RAO of minimizing further degradation of the aquifer. In addition, this alternative presumes that a new well could be sited in an area free of potential groundwater impacts. Since the nature and extent of groundwater impacts in other areas of the Rialto-Colton basin have not yet been characterized, selection of an appropriate location for this well may not be possible at this time. As a result, this alternative was not evaluated in detail.

- Replace CR-3 Water with Another Source – This alternative would involve an agreement with another water supply entity (e.g., San Bernardino Valley Municipal Water District) to procure and deliver water to the City's municipal water supply system. Since this would not result in any containment of the existing release, it would not satisfy the RAO of minimizing further degradation of the aquifer and this alternative was not evaluated in detail.

- Groundwater Pumping, Above Ground Treatment, and Aquifer Recharge – This alternative would involve intercepting the contaminant plume with an array of groundwater extraction wells. Pumped water would be delivered to an above ground treatment plant where contaminants would be removed before treated water is pumped to an aquifer spreading basin (such as Cactus Basin) or otherwise returned to the aquifer. This option was retained for detailed evaluation.

- Groundwater Pumping, Above Ground Treatment, and Delivery of Water to Rialto's Supply System – This alternative also involves interception of the plume with an array of extraction wells and treatment of extracted groundwater with an above ground treatment plant. Rather than recharging the treated water back to the aquifer however, this alternative would deliver the treated water to the City of Rialto's municipal supply system. This alternative was retained for detailed consideration.

Since four of the above alternatives did not satisfy the plume containment RAO, they were not considered feasible and were eliminated from further analysis. For all the remedial alternatives that were analyzed, until the preferred alternative can be implemented, it was assumed that an alternate municipal source of water would be supplied, should perchlorate or VOC concentrations in water extracted form CR-3 exceed MCLs or ALs

The alternatives that were retained for further analysis included:

Alternative 1 - Direct Treatment of the Aquifer

Alternative 2 - Aquifer Treatment by Recirculating Wells Upgradient of CR-3

Alternative 3 - Groundwater Pumping, Above Ground Treatment, and Aquifer Recharge

Alternative 4 - Groundwater Pumping, Above Ground Treatment, and Delivery of Water to Rialto's Supply System

These remaining alternatives were considered viable for the project and were evaluated in greater detail using criteria identified by the National Contingency Plan (NCP [40 CFR 300.430(e)(9)(iii)]) to address the U.S. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements and considerations, as well as technical, policy, and end-use issues. These criteria served as the basis for selecting the preferred remedial action.

In summary, the criteria used to evaluate the four alternatives were as follows:

Federal Criteria

- Overall Protection of Human Health and the Environment
- Compliance with Applicable or Relevant and Appropriate Requirements
- Long Term Effectiveness and Permanence
- Reduction of Toxicity, Mobility, or Volume through Treatment
- Short Term Effectiveness
- Implementability
- Cost
- State Acceptance
- Community Acceptance

California State Criteria

- Health and Safety Risks
- Beneficial Uses of Site Resources
- Effect of Remedial Action on Groundwater Resources
- Site Specific Characteristics
- Cost Effectiveness of Alternative Remedial Action Measures
- Potential Environmental Impacts of Remedial Action

The criteria are detailed in the DIRI/FS.

Based on the feasibility analyses, it is concluded that project objectives could best be met by installing a groundwater extraction well network to intercept the plume, constructing a water treatment plant to remove perchlorate and VOCs, and delivering treated water to the City of Rialto for introduction into their municipal supply system (Alternative 4).

This alternative will take several months to permit and construct. Since the RWQCB is anticipated to require that remedial action be in place by April 1, 2005, the preferred remedial response also involves the temporary purchase of replacement water for the City of Rialto should perchlorate or VOC concentrations in water extracted form CR-3 exceed MCLs or ALs.

Draft Interim Remedial Action Plan

As described above, this DIRAP proposes construction of a "pump and treat" plume containment and treatment system, delivery of treated water to the City of Rialto, and temporary procurement of an alternative source of water if MCLs or ALs for perchlorate or VOCs are exceeded at Well No. 3.

The plume interception groundwater extraction system will include 6 wells spaced approximately 400 on center across the width of the identified plume. As conceptually designed, the well array would be positioned approximately perpendicular to the plume migration path and parallel to the City's airport runaway alignment just upgradient of CR-3 (Figure 1). Extraction wells will be constructed to a depth of approximately 525 feet using 8-inch diameter stainless steel well screen in the anticipated producing zone and mild steel blank casing above the groundwater table. To induce hydraulic containment of the plume, during times of drought (such as the current condition where groundwater levels are near historical lows), each well will be pumped at approximately 175 gallons per minute (gpm), which amounts to about 1050 gpm for the total extraction system. When groundwater levels rise in the future, pumping rates will need to be increased to maintain plume containment. The maximum pumping rate anticipated for individual wells is approximately 350 gpm, for a total maximum treatment system load of about 2100 gpm. Groundwater pumping within the wells will be automated using level-actuated controllers to assure that optimal pumping rates are achieved.

After pumped water is delivered to the ground surface, water will be conveyed via a pipeline header system to a water treatment plant. The treatment plant itself will occupy a footprint of approximately 50 feet by 50 feet and will employ widely used technologies to separately remove perchlorate and VOCs.

VOCs will be treated using granular activated-carbon (GAC) as a filter media where VOCs become bound to carbon particles. Perchlorate will be treated using ion-exchange columns to "bind" perchlorate to specially formulated resins. Spent carbon and resins will be periodically removed, replaced and hauled off site for destruction at approved facilities. Spent carbon resins will be handled and transported by trained individuals and firms that are licensed for this work. The treatment plant will be operated to yield non-detectable concentrations of perchlorate and VOCs.

Once contaminants are removed, the treated water will be disinfected and readied for delivery to the City's water supply system. Routine testing will be performed to monitor contaminant removal and to verify the adequacy of treated water for distribution to the City.

Since construction of the preferred remedial alternative could be delayed by unforeseen circumstances, the County of San Bernardino will also arrange for purchase and delivery of replacement water to the City of Rialto should perchlorate and VOC MCLs or ALs be

exceeded after April 1, 2005 but before the treatment system is on-line. If needed, replacement water will be procured from other regional water purveyors who have existing pipeline connections with the City's water supply system.

STATEMENT OF REASONS TO MITIGATE GROUNDWATER IMPACTS NEAR CITY OF RIALTO WELL NO. 3 RIALTO, CALIFORNIA

In accordance with California Health and Safety Code (HSC) section 25356.1(d), the County of San Bernardino Solid Waste Management Division (SWMD) has prepared this Statement of Reasons as part of the attached Draft Interim Remedial Action Plan (DIRAP) to mitigate perchlorate and volatile organic compound (VOC) impacts to groundwater near the City of Rialto's Well No. 3 (CR-3) in Rialto, California.

The DIRAP presents a summary of the Remedial Investigation (RI) that was completed to characterize the nature and extent of groundwater impacts near CR-3, and summarizes the risks to public health and the environment associated with those impacts. The DIRAP also provides a discussion of the remedial alternatives that were evaluated in the Feasibility Study (FS) that was prepared for the project. The DIRAP recommends a remedial alternative (Alternative No. 4) that effectively satisfies the objectives of protecting public health and the environment. More specifically, the preferred alternative most cost-effectively meets the remedial objectives of minimizing the potential for further downgradient impacts to groundwater and it assures protection of the regional water supply at well CR-3. Analysis of the preferred alternative with respect to criteria established in section 25356.1(d) also indicates that this approach is favored over other alternatives.

The recommended remedial alternative involves installation of a groundwater extraction well network to intercept the contaminant plume, construction of a perchlorate and VOC treatment plant incorporating well-documented treatment technologies, disinfection of treated water by conventional chlorination methods, and by delivery of the treated water product to the City of Rialto for introduction to it's water supply system. Since installation of the preferred remedial alternative could be delayed by unforeseen conditions, the County of San Bernardino will also arrange to purchase and deliver replacement water to the City of Rialto if water samples from CR-3 exceed the maximum contaminant levels (MCLs) for VOCs or the state Action Levels (Als).

The SWMD believes that the attached DIRAP complies with the law as specified in HSC section 25356.1. Section 25356.1(e) requires that Remedial Action Plans "shall include a statement of reasons setting forth the basis for the removal and remedial actions selected." The statement of reasons "shall also include an evaluation of the consistency of the removal and remedial actions proposed by the plan with the federal regulations and factors specified in (d) . . . . " Subdivision (d) specifies six factors against which the remedial alternatives in the DIRAP must be evaluated. The proposed remedial action is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (National Contingency Plan [NCP]), and federal Superfund regulations. The statement of reasons also includes the preliminary Nonbinding Allocation of Responsibility (NBAR) as required by HSC section 25356.1 (e).

The following discussion evaluates the consistency of the removal and remedial actions proposed by the plan with the federal regulations and factors specified in HSC section 25356.1(d) including:

1. Health and Safety Risks – Section 25356.1 (d)(1)

The chemicals of concern identified for this site are perchlorate and VOCs, particularly TCE. While the potential risks associated with perchlorate on humans are not fully understood, public health concerns currently focus on the potential effect of the anion on thyroid function. California has completed a draft toxicity assessment that identifies a maximum drinking water concentration (AL) of 6 micrograms per liter (μg/L) for this constituent.

TCE is a suspected human carcinogen that can affect (and damage) several body organs and systems such as the central nervous system, respiratory system, liver, kidneys, and heart, and may cause contact dermatitis of the skin. Both the USEPA and California Department of Health Services have established primary MCLs of 5 μg/L for TCE.

The DIRAP is intended to propose a preferred alternative to reduce the concentrations of the above constituents to non-detectable levels prior to the exposure to the public. In addition, treatment plant personnel and worker health and safety is not anticipated to be problematic since the proposed treatment system will utilize proven technologies for which substantial health and safety protocols have been developed and proven.

2. Beneficial Uses of Site Resources – Section 25356.1(d)(2)

Groundwater is an important regional resource for municipal supply and commercial/industrial purposes, and the proposed alternative will allow for continued and uninterrupted use of the aquifer in the vicinity of CR-3.

3. Effect of the Remedial Actions on Groundwater Resources

The preferred alternative will minimize impacts to the regional groundwater resource by limiting the potential for additional downgradient migration. In addition, it assures that the resource providing water to City of Rialto water supply at CR-3 is protected.

4. Site-Specific Characteristics – Section 25356.1(d)(4)

The hydrochemistry of groundwater near CR-3 has been extensively characterized. While a variety of soil types have been identified in the groundwater zone beneath the site including sandy gravels, gravelly sands, silty sands, and silts, plume migration has paralleled the groundwater and stratigraphic gradients to the southeast and has developed a relatively long and narrow "cigar shape" distribution. In the absence of remedial actions, a strong potential exists for continued plume migration further downgradient within the groundwater basin. In contrast, site specific characteristics indicate that there is an opportunity to contain the release within a relatively shallow groundwater zone in the immediate vicinity of CR-3.

5. Cost-Effectiveness of Alternative Remedial Action Measures – Section 25356.1(d)(5).

Both the capital costs and operating and maintenance (O&M) costs were considered for the four viable remedial alternatives identified in the DIRAP. The preferred remedial response (Alternative No. 4) was the most cost-effective alternative to meet the Remedial Action Objectives.

6. Potential Environmental Impacts of Remedial Actions – Section 25356.1(d)(6)

Potential groundwater impacts will be mitigated under the proposed remedial action plan and the plan will not create any significant new environmental impacts. This project will comply with provisions of the California Environmental Quality Act (CEQA) prior to construction.

7. Preliminary Nonbinding Allocation of Financial Responsibility – Section 25356.1(e)

The DIRAP must include a "nonbinding preliminary allocation of responsibility (NBAR) among all identifiable potentially responsible parties at a particular site, including those parties which may have been released, or may otherwise be immune, from liability. . . " (HSC section 25356.1(e)). The current NBAR to mitigate groundwater impacts near CR-3, as issued by the SWMD, is attached.

PRELIMINARY NONBINDING ALLOCATION OF RESPONSIBILITY (NBAR) GROUNDWATER IMPACTS NEAR CITY OF RIALTO WELL NO. 3 RIALTO, CALIFORNIA

California Health and Safety Code (HSC) section 25356.1(e) requires that the County of San Bernardino Solid Waste Management Department (SWMD) prepare a preliminary nonbinding allocation of responsibility (the "NBAR") among all identifiable potentially responsible parties (PRPs). HSC section 25356.3(a) allows PRPs with an aggregate allocation in excess of 50% to convene an arbitration proceeding by submitting to binding arbitration before an arbitration panel. If PRPs with over 50% of the allocation convene arbitration, then any other PRP wishing to do so may also submit to binding arbitration.

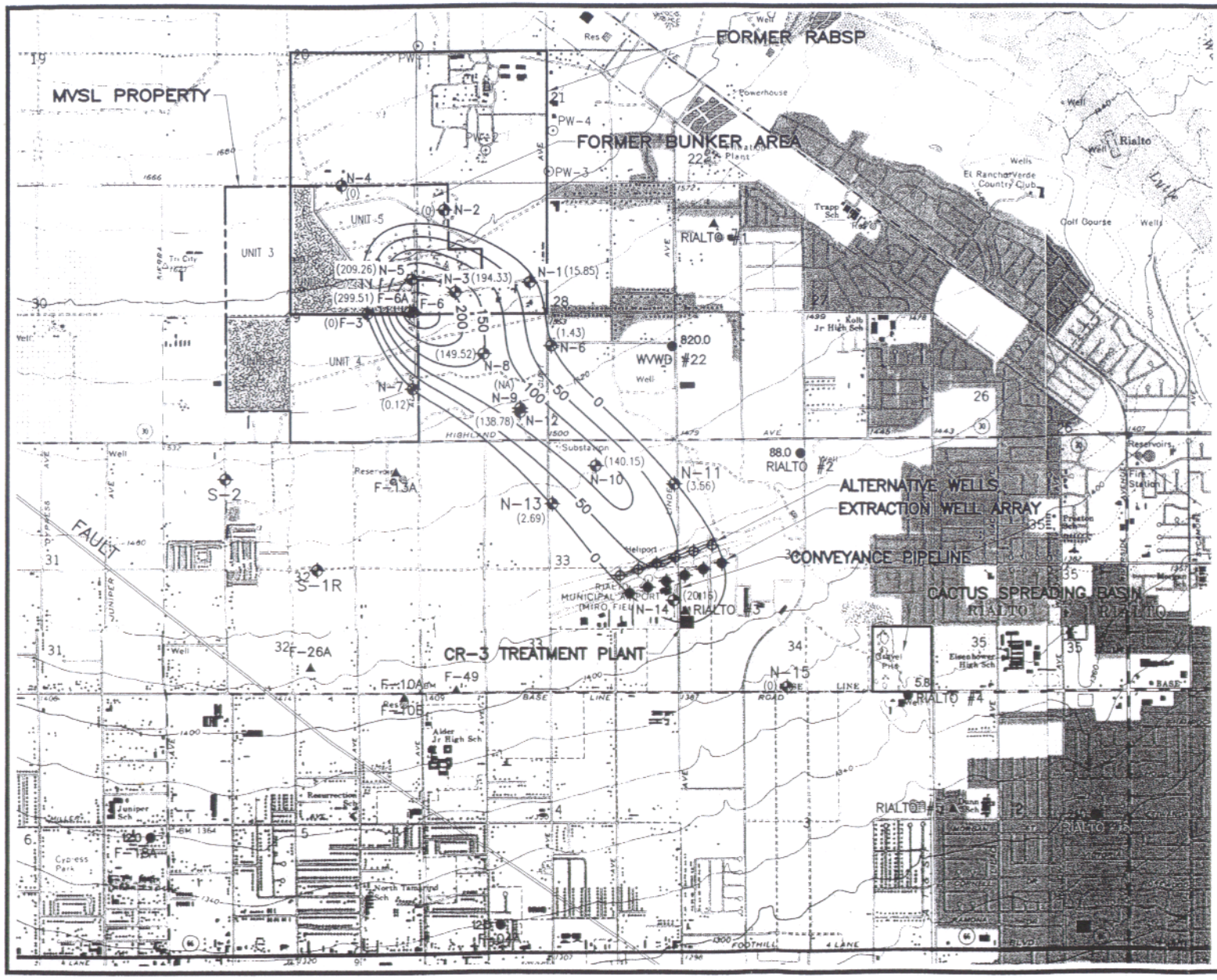
The sole purpose of the NBAR is to establish which PRPs will have an aggregate allocation in excess of 50% and can therefore convene arbitration if they so choose. The NBAR, which is based on the evidence available to the RWQCB, is not binding on anyone, including PRPs, RWQCB, or the arbitration panel. If a panel is convened, its proceedings are de novo and do not constitute a review of the provisional allocation. The arbitration panel's allocation will be based on the panel's application of the criteria spelled out in HSC section 25356.3(c) to the evidence produced at the arbitration hearing. Once arbitration is convened, or waived, the NBAR has no further effect, in arbitration, litigation or any other proceeding, except that both the NBAR and the arbitration panel's allocation are admissible in a court of law, pursuant to HSC section 25356.7 for the sole purpose of showing the good faith of the parties who have discharged from the arbitration panel's decision.

The following is a preliminary nonbinding allocation of responsibility for impacted groundwater immediately upgradient of City of Rialto Well No. 3.

The County of San Bernardino, as the owner of the Shulz Trust parcel northeast of the Mid-Valley Sanitary Landfill is a liable party based on its ownership of property that the Regional Water Quality Control Board (RWQCB) believes to be one of the sources of perchlorate. However, the County did not originally dispose of or discharge perchlorate and VOCs.

Other parties are liable for the discharge of the perchlorate and VOCs that the County is responding to in this matter, but the RWQCB is investigating the nature and extent of their responsibility and the RWQCB has not yet made any determinations thereon.

Therefore, other than this preliminary determination that the County is a liable party, the RWQCB makes no determination as to the relative extent of the County's liability compared to other parties.



EXPLANATION:

F-26A	WELL NAME
▲	UNCONTAMINATED WELLS
●	PERCHLORATE CONTAMINATED WELLS
12.0	HISTORICAL MAXIMUM PERCHLORATE CONCENTRATION IN $\mu g/L$ (RWQCB, 2003)
——	GROUNDWATER BASIN BOUNDARY
⊕	PERCHLORATE INVESTIGATION WELLS (GLA)
—100—	LINE OF EQUAL PERCHLORATE MASS PER UNIT AREA (mg/ft^2)
(149.52)	PERCHLORATE MASS PER UNIT AREA (mg/ft^2)
⊙	MONITORING WELLS BY OTHERS
◆	CONCEPTUAL EXTRACTION WELL LOCATIONS
⊕	CONCEPTUAL ALTERNATIVE WELL LOCATIONS

REFERENCE

BASE MAP: USGS 7.5 MINUTE SERIES (TOPOGRAPHIC) DEVORE, FONTANA, SAN BERNARDINO NORTH AND SOUTH CALIFORNIA QUADRANGLES

WELL AND FAULT OVERLAY: RWQCB, 2002

MVSL AND RELEASE OVERLAY: GEOLOGIC ASSOCIATES, 2003

N

APPROXIMATE SCALE: 1" = 2,000'

FIGURE 1

CONCEPTUAL EXTRACTION WELL/ TREATMENT PLANT LOCATIONS

DRAFT INTERIM REMEDIAL ACTION PLAN, MITIGATION OF PERCHLORATE AND VOC IMPACTS TO GW RIALTO, CA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	SEPTEMBER 2004	2004-056

ATTACHMENT C

Cleanup and Abatement Order
R8-2003-0013

California Regional Water Quality Control Board
Santa Ana Region

Cleanup and Abatement Order No. R8-2003-0013
for
County of San Bernardino, Solid Waste Management Division
City of Rialto, San Bernardino County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. The County of San Bernardino (hereinafter County) currently owns property in Sections 28 and 29, Township 1 North, Range 5 West, San Bernardino Base and Meridian, in the County of San Bernardino, State of California.

2. The County operates the Mid-Valley Sanitary Landfill (MVSL) on the property noted above. This property overlies the Rialto Groundwater Subbasin. The MVSL property consists of about 497 acres, of which about 222 acres are currently used for waste disposal activities. A sand and gravel operation utilizes a portion of the property in accordance with a formal agreement between the County and the sand and gravel operator. Soil is stockpiled on another portion of the property for processing by the sand and gravel operation prior to use of that portion of the property for landfilling. Ultimately, waste disposal activities will be expanded to include about 408 acres of the property, all within Section 29.

3. The MVSL is a municipal solid waste disposal facility that has been operated by the County since 1958. Landfilling of waste has been conducted in phases, with each phase consisting of waste being applied on a different portion of the property. Early phases of the landfill (Units 1 and 2) were constructed on native soil without a clay or synthetic liner, or a leachate collection system. The most recent phase of the landfill (Unit 3) began operation in 2002. This phase has, and all future phases (Units 4 and 5) will have, a double composite liner and a leachate collection and removal system.

4. Perchlorate, in the form of perchlorate salts, such as ammonium perchlorate, was used historically, and is still used, by several tenants of properties in close proximity to the landfill. Therefore, it is possible that the landfill may have accepted perchlorate waste from these neighboring tenants. However, there is currently no evidence that perchlorate waste was disposed in the landfill or that there has been a discharge of perchlorate from Units 1, 2 or 3 of the landfill.

5. The County purchased the northeast area of its current property in 1994. This property contained storage bunkers that were known to have housed explosives, chemicals, propellant, oxidizers, and fireworks. These bunkers were constructed, and were initially used, by the military in the mid-1940s. The bunkers were used subsequently by aerospace, hazardous waste and fireworks companies. Perchlorate salts were handled and stored in these bunkers. The County's operations contractor demolished the bunkers in 1998. A portion of this area is currently utilized by a sand and gravel operation.

6. Perchlorate salts are highly soluble and dissociate in water to form perchlorate ions. There are currently no state or federal drinking water standards for perchlorate. However, in 1997, the California Department of Health Services (DHS) established a drinking water Action Level (AL) for perchlorate of 18 parts per billion (ppb), and in 2002, DHS lowered the AL to four ppb. An AL is a temporary safe drinking water level that is based on limited studies that have been performed. Perchlorate is currently present in the Rialto, Colton, Chino I and Chino II Groundwater Subbasins. The West San Bernardino County Water District, the Fontana Water Company, and the Cities of Rialto and Colton have limited or ceased use of 20 municipal water supply wells that exceed the AL for perchlorate.

7. Municipal water supply wells in the Rialto, Colton, Chino I and Chino II Groundwater Subbasins have been, or are likely to be, affected by the perchlorate pollution in these basins. Regional Board staff is currently attempting to identify all parties that may have discharged perchlorate in these basins.

8. Perchlorate was initially detected in low concentrations (less than 5 ppb) in two of the MVSL monitoring wells in 1997. In 2001, the concentration of perchlorate in one of these wells increased significantly, to 250 ppb. As a result, the County increased its monitoring for perchlorate in existing monitoring wells and assessed possible perchlorate sources on its property, which included collecting and analyzing soil samples and process water samples from the sand and gravel operation on the northeast area of the County's property. The County found that the source of the perchlorate currently found in groundwater immediately adjacent to, and downgradient of, the County's property may be from the northeast area of its property that the County purchased in 1994.

9. Beginning in August 2002, the County installed six monitoring wells on, and in the vicinity of, the northeast area of their property. The analytical results of groundwater samples obtained from these monitoring wells showed that perchlorate was not present in the monitoring wells located

upgradient of the northeast area of the County's property, but was present in concentrations as high as 1,000 ppb in a monitoring well downgradient of the northeast area.

10. On September 26, 2002, the Executive Officer issued an Investigation Order to the County. This Order directed the County to further define the lateral and vertical extent of perchlorate in soil and groundwater in the vicinity of the MVSL.

11. On November 15, 2002, the County submitted a work plan to further define the lateral and vertical extent of perchlorate. Board staff has completed its review of the work plan, and is coordinating and evaluating comments on the work plan that are being submitted by other interested parties.

12. Based on the results of the soil and groundwater investigations conducted by the County, it is evident that perchlorate is being discharged to groundwater from property that is currently owned by the County.

13. The beneficial uses of the Rialto Groundwater Subbasin include:

    A. Municipal and domestic supply,
    B. Agricultural supply,
    C. Industrial service supply, and
    D. Industrial process supply.

14. The County has caused or permitted, or is causing or permitting, waste, i.e., perchlorate, to be discharged to waters of the state, specifically the Rialto Groundwater Subbasin, and has created, or threatens to create, a condition of pollution or nuisance. (The term "waste" as used here is defined at Water Code §13050(d).)

15. California Water Code Section 13304 allows the Regional Board to recover reasonable expenses from responsible parties for overseeing cleanup and abatement activities. It is the Regional Board's intent to recover such costs for regulatory oversight work conducted in accordance with this order.

16. This enforcement action is being taken by a regulatory agency to enforce a water quality law. Such action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Section 15321, Article 19, Division 3, Title 14, California Code of Regulations.

17. Additional investigation is necessary to define the vertical and lateral extent of the perchlorate that is discharging, has been discharged, or threatens to be discharged, from the County's property.

18. It is appropriate to order the County to clean up and abate the effects of the discharge of perchlorate from property that the County currently owns and controls.

19. A similar order may be issued at a later date to former tenants or former owners of the County's property if Regional Board staff obtains additional information indicating that other specific tenants or owners have also discharged perchlorate that is present in the groundwater.

IT IS HEREBY ORDERED THAT, pursuant to Section 13304, Article 1, Chapter 5, Division 7, of the California Water Code, the County of San Bernardino shall cleanup and abate the effects of the discharge at the site as follows:

1. Implement the work plan submitted on November 15, 2002, as approved by the Executive Officer, in order to further define the lateral and vertical extent of the perchlorate that is discharging, has been discharged, or threatens to be discharged, from the County's property noted in Finding 1, above.

2. Prepare and implement additional work plans that the Executive Officer deems necessary to sufficiently characterize the lateral and vertical extent of perchlorate that is discharging, has been discharged, or threatens to be discharged, from the County's property. The work plans shall be implemented in accordance with time schedules approved by the Executive Officer.

3. After the Executive Officer determines that the lateral and vertical extent of perchlorate that is discharging, has been discharged, or threatens to be discharged from the County's property has been sufficiently defined, submit a detailed remedial action plan, including an implementation schedule, to cleanup or abate the effects of the perchlorate that is discharging, has been discharged, or threatens to be discharged, from the County's property. The remedial action plan and implementation schedule shall be submitted within 60 days of the Executive Officer's notification to the County that the definition of the extent of perchlorate is sufficiently complete. The remedial action plan and schedule shall be subject to approval by the Executive Officer.

4. Implement the remedial action plan in 3., above, as approved by the Executive Officer.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on January 17, 2003.

Gerard J. Thibeault
Executive Officer